An Essay
On Asthma
For The Degree
Of Doctor of Medicine;
Submitted
To The Examination
Of
John McDowell. L.L.D. Provost,
The
Trustees and Medical Professors
Of The
University of Pennsylvania,
By
Joseph Bullock junr.
Of
Philadelphia. on the 19th day
of April 1809.

Of Asthma

When it is consider'd that the Lungs perform one of the most important functions of the Animal Oeconomy, & (tho a very hardy viscus) are from their great exposure frequently liable to disease, which on account of their insensibility, sometimes makes such rapid progress before a physician is aware of it, as to render a cure impracticable, it will not be denied that they merit the greatest vigilance & attention. Baglivi earnestly exhorts Young practitioners to employ their utmost attention in treating pulmonary diseases & warns them not to be deceiv'd by fallacious appearances, nor easily induc'd to make a favorable prognostick concerning them. Asthma is a disease which often attacks this organ, & if not

speedily arrested frequently terminates in death or an incurable disease - as Hydrothorax - Consumption Epilepsy &c - It appears to be principally seated in the Bron=
=chial vessels.

Of the diseases with which this has been complicated - & the manner of distinction I shall briefly take notice in this place It may be distinguish'd from pneumony by having little or no fever - by its being atten=
=ded with great languor & dejection - & by the pulse being more irregular but without much tension - these marks are suf=
=ficient to distinguish it from that disease - It has been confounded with ~~[illegible]~~ dyspnea but from this it may rea=
=dily be known by its having intervals of ease & apparent health. Asthma has been divided into the spasmodic & pituitous - or dry & humid - the former attacks in early life the latter in the decline - & terminates in a few days either in death - a recovery - or a chronic disease -

Sir John Floyer remarks that he has met with some Asthmatics who had labor'd under this disease in a chro=
=nic form for 50 years & yet enjoy'd a toleriable State of health without much affection of the lungs - or inability to follow their usual employments - A paroxism of asthma may be known - by a difficulty of breathing - little or no ex=
=pectoration in the first stage of the fit - tho it is often copious towards its termination - This disease is some=
=times hereditary - attacks at childhood, at puberty, at the age of 30, & in the decline of life. - The causes that dis=
=pose to this disease - are such as dispose, to a debility of the bronchial vessels - they may be divided into direct & indirect - to the 1st belong - great heat - on this account it more frequently occurs in Summer, 2d cold succeed=
=ing heat - 3d Certain dry & moist winds - 4th certain particles received into, & acting mechanically on the lungs - 5th certain odors - as the smell of new or burn=

=ing feathers - & even of Ipecacuanha, have induc'd it according to Dr Rush. 6th Carbonic acid Gas & the smoke of tobacco recei'd into the Lungs - To the indi= =rect causes belong 1st suppression of customary evacu= =ations particularly from the uterus &c - 2d repell'd eruptions - 3d worms in the stomach 4th Gout 5th high situations near the sea shore 6th Gall Stones 7th long fasting - 8th pregnancy, this sometimes produces it, cau= =sing it to be habitual - & in others, only to occur during that period & disappear with it - 9th indigestible ali= =ment (Professor Rush mentions a case in which it was induc'd by eating Waffles & buckwheat Cakes) & 10th ascending steep places has induc'd it - The pre= =monitary symptoms of this disease - are lassitude, great uneasiness at the Breast, drowsiness after dinner, flat= =ulency - difficult respiration, short cough, dry & cold feet &c - when these symptoms appear the disease

may frequently be arested in its progress - By pediluvi=
=um - vomits - purges &c - sitting up all night has in some
instances prevented the fit - The pulse frequently indicates
no disease - this is owing to the non sympathy of the aortic
system - hence the propriety of dividing the arterial pre=
=disposition, into pulmonary & aortic - The respiration is
performd with a wheezing noise - & sometimes the spasm
is so great, as to shut the Glottis - Great regard should
be paid with respect to the posture of the patient - as it is
often difficult for him to place himself in any attitude
which affords him the least relief - In determining on
the most proper situation for him - whether recumbent
or erect - the great object is, the expansion of the thorax;
the posture that most favors this - & is at the same time
easiest to the patient - is that which they are often found
in - viz. with their legs stretch'd out on a chair & their
heads inclining forwards - as this situation affords them

most relief it should always be recommended by a Physician - a paroxysm of asthma mostly occurs at night the system being at that time ~~being~~ more excitable & predis=posd to disease - it lasts from ½ to 1-2-or 3 days - & occurs from 1-2-or 3 to 36 times a year - In recent cases the Lungs show no marks of disease - but in old chronic cases, they exhibit distinct marks of it - viz - such as arise from an accu=mulation of mucous, from rupturd vessels, or from a gan=grene of the parts - The most general appearances that dissections exhibit when death is the consequence of <u>this disease</u> - are 1st no disease whatever 2dly the vessels of the pleura on the surface of the Lungs & of the trachea are turgid & obstructed - 3dly a livid appearance which resem=bles the approach of gangrene - & 4thly a tough white vis=cid substance occupying the Bronchial vessels - a vio=lent fit of the asthma has all the symptoms of approach=ing death - but a remarkable circumstance attending

it, is, that a cold breath, which is fatal in all other diseases, is not so in this - The signs that mark an unfavorable termination of this disease are the following - If the paroxysms in the beginning are very severe - of long duration & with short & imperfect remissions - the cure may be consider'd difficult - but under these alarming circumstances particular attention is necessary - If notwithstanding every effort the paroxysms return more frequently & the difficulty of breathing continues there is little hope of succeeding in the cure - the case is still more dangerous if hoarseness comes on - if respiration is perform'd with a croaking noise, & the spasm of the diaphragm & abdominal muscles encrease - But if on attempting to swallow - there is danger of suffocation - if a profuse sweat break out together with fainting - if the extremities become cold - the lips - tongue, mouth, & throat parch'd, - together with strong convulsions - it is easy to judge under these circumstances

that the patient is beyond relief. But if on the contrary the asthmatic paroxysms are of short duration & moderate - if the intervals are long & become more distinct upon the applica=tion of the usual remedies - a favorable termination may be expected - If coughing or vomiting happen naturally & a usual discharge of phlegme & mucous from the nose follow - if the bowels are natural & a diaphoresis ensue a happy termination may almost with certainty be fore=told - If the disease is suffer'd to advance far, before me=dical aid is call'd, tho the remedies, even then, have the effect of stopping its progress - yet the probability of obtain=ing a perfect cure is less & the patient is frequently sub=ject to periodical attacks of it.

Of the cure of Asthma.

The remedies for the cure of this disease divide them=selves into two kinds or grades - such as are proper du=ring the paroxysm - & those which are necessary during

the interval - The remedies proper for a paroxysm are 1st V.S. when there is much oppression dyspnea &c Pope when laboring under it, acknowledg'd the efficacy of this remedy. Bleeding shews its advantages 1st by shortening the fit 2dly by rendering it much less violent & 3dly by preventing those obstructions in the Lungs, that are often the consequence when this remedy is not resorted to - producing - pulf. Con^n - hydrothorax - & ascites - The face is more frequently found florid or red in this disease - but a pale face should by no means prohibit the use of the Lancet. 2dly - Vomits are also of great service, by creating a new action; Squills are often usd for this purpose - but Tart: Emet: or Ippecacuanha are equally good. 3dly Purges - it is very necessary to pay strict attention to the state of the bowels - & as patients in this disease, are often costive of course purges are necessary - of these Calomel - Castor oil - Rheubarb - Salts &c may be given In cases of great morbid excitement Cold air & drinks

may be usd - After this is reducd, opium, Laudanum in small & frequent doses, with or without assafœtida - musk has been recommended, vapor of hot bath with or without horse-radish - inhald into the Lungs - frequently affords great relief - the smell of cloves has been found useful, oxygen-gas according to Dr Beddoes - 4thly Blisters - (the efficacy of blisters in removing pains & spasms, is universally known) are an invaluable remedy in this disease & when applied to the wrists often act like a charm - they may likewise be applied to the Breast & ankles - 5thly - mineral & vegetable acids - very strong Coffee - in the proportion of ℥i of Coffee to ℥iv - of water - warm air - we find that Cold & warm air are useful in the same disease - & this shews the necessity of prescribing different & almost opposite remedies - in different stages of the same disease to accomodate the system - a change of air - City air is generally more agreeable to asthmatics than Country, as it is not

so readily affected by the sensible qualities of the atmos=
=phere; this is prov'd by the Barometer which shews the change
of the weather much sooner in the County, than in the City;
Asthmatics often feel an inclination to the fit before any
change in the weather is perceptible; this corresponds
with a remark of Sir John Floyer, who observes that
before a fall of snow or rain He was often sensible of
a great straightness at the chest & stomach. We may here
ask whether asthma can or cannot be cur'd, yes, certainly,
it has been cur'd by nature & by accident. In the latter way
a patient was cur'd who had labor'd under it a long
time without receiving any benefit from medical aid, or
being able to procure sleep in any way, but in a sitting posture;
He however being accidentally pursued by some Indians,
took shelter in a damp cave, where after remaining
some time, he began to feel drowsy & at length fell
asleep, he remain'd there all night the next night-

finding that he was unable to sleep at home - he resolv'd to try the cave - which being a second time successful in procuring him sleep - he had it converted into a decent habitation - & finally recover'd - this case is mentioned by Dr Rush in his Lectures - In the former way it has been cur'd 1st by pregnancy - 2dly by the cessation of the menses - 3dly by a new disease, as jaundice, inviting morbid action to some other part - 4thly by a change of climate - but in this the kind of asthma under which the patient labors, should be ascertain'd - for if it be of the pituitous & humid kind, a dry air is most proper if spasmodic & dry the reverse - & in the last case Dr Thomas Reid recommends holding a sponge fill'd with water to the mouth - The air of the apartments in which patients with this kind of asthma sit, should be constantly kept moist by the evaporation of water from a stove - while Dr Jones remain'd in Phila=

-delphia he was seldom if ever affected with Ast=
=hma, but when in New York was almost con=
=stantly troubled with it - The next class of remedies
or those which are proper in the interval are 1st care=
=fully avoiding plethora - this is to be guarded against by
occasional V.S. & low diet 2dly avoiding all its exciting
causes, 3dly a sexton in the side or issues in the arms;
Sir John Floyer recommends issues - from a conside=
=ration of the benefit that is often receiv'd from critical
evacuations in asthmatic cases - & adds that he had been
informd - that King William, during the running of the
Sore upon his shoulder - made by a ball at the Battle
of the Boyne in Ireland, was free from his asthma -
4thly gentle exercise & hard labor. The 1st may be usd when
the patient is unable to labor - the best mode of exercising
is that of riding on Horseback, long or short distances ac=
=cording to the situation & state of the patient - partial - ex=

=cises may with propriety be us'd - such as rowing, rai=
=sing weights, playing at Battledore &c. The cold bath
when us'd prudently is an excellent remedy it restores
vigor & tone to the system - the efficacy of this remedy is
confirm'd by Dr. Baynard who says he had several ac=
=counts of persons who were much relieved, & others per=
=fectly cured by the use of cold immersions in asthmas
& other difficulties of breathing - especially if the disease
had not been of long continuance - A recurrence to old &
accustom'd habits is said to have cur'd it - An instance
of a Lady is mention'd by Dr Rush, who on leaving off the
practice of taking snuff was seiz'd with asthma - which
continued six months & was cur'd by resuming her old
habit - a diet of Garlic - has been of great service - oil
of amber - Tar in pills or water whichever is most agree
=able - to the patient - The habitual use of the oxyde
of iron in large doses - Sleeping on a mattress - as all

diseases partake more or less of an Intermittent type or form, these remedies are most advantageously us'd just before or as near the accession of the fit as possible - Bitters of all kinds - Elixir of vitriol - & Bark have been us'd - Lastly a change of climate residence or occupation. Persons have been cur'd by going from Naples to Vienna & vice versa - none of these remedies should be overlook'd in the cure of this disease - they may all be tried in succession & if administer'd by a judicious practitioner - there is every reason to hope he will in numerous instances, have the great satisfaction to find, that his exertions for the relief of the distress'd & afflicted, have been crown'd with success.